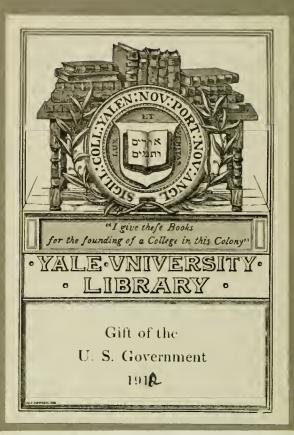


Herr, J. W.

Ophthalmia Neonatorum ...

Washington, 1911.



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# TREASURY DEPARTMENT

Public Health and Marine-Hospital Service of the United States

### PUBLIC HEALTH BULLETIN No. 49

OCTOBER, 1911

# OPHTHALMIA NEONATORUM

AN ANALYSIS OF THE LAWS AND REGULATIONS
RELATING THERETO IN FORCE IN
THE UNITED STATES

BY

J. W. KERR
Assistant Surgeon General

PREPARED BY DIRECTION OF THE SURGEON GENERAL



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# OPHTHALMIA NEONATORUM.

AN ANALYSIS OF THE LAWS AND REGULATIONS RELATING THERETO IN FORCE IN THE UNITED STATES.

# By J. W. Kerr, Assistant Surgeon General.

The undue prevalence of ophthalmia neonatorum and its dire effects on the individual forces upon sanitarians and social workers the great importance of prophylaxis. The disease and its methods of transmission have long been known, and it is recognized that it is easily preventable. Notwithstanding this fact, it is generally estimated that from 25 per cent to 40 per cent of all blindness can be referred to this cause.

There are no complete statistics showing the prevalence of ophthalmia neonatorum, and only an approximate idea can be had of the number of cases by studying the admissions to schools for the blind. A committee of the British Medical Association found that more than one-third of those in blind schools of Great Britain owed their affliction to this disease.<sup>1</sup>

In the United States and Canada in 1907, out of 224 admissions to 10 schools for the blind, 59, or 24.38 per cent, were blind as a result of ophthalmia neonatorum; and out of 351 admissions to certain schools in the United States and Canada in 1910, 84, or 23.9 per cent, were blind from this cause.

As a result of studies made of ophthalmia neonatorum in 10 manufacturing cities of Massachusetts, Greene has presented figures which show that the minimum morbidity rate for this disease was 6.4 per 1,000 births. A more complete census made by him for the practice of 173 physicians in 9 cities revealed an average morbidity rate of 10.8 per 1,000 births.<sup>4</sup>

These ratios, of course, only apply to the localities in which the investigations were made. The statistics presented here and elsewhere, however, and the experience of the medical profession, are sufficient to emphasize the importance of the disease and to indicate that its continued prevalence is a matter of serious concern.

When it is realized that the exercise of practically all of the trades or professions open to man depends almost absolutely on good eye-

British Medical Journal, May 8, 1909.

<sup>&</sup>lt;sup>2</sup> Journal, American Medical Association, May 23, 1909, p. 1745.

<sup>&</sup>lt;sup>3</sup> Journal, American Medical Association, July 1, 1911, p. 72.

<sup>4</sup> Monograph Series of the American Association for Conservation of Vision, Vol. I, No. 1.

sight, the importance of ophthalmia neonatorum as an economic factor becomes evident. Every child infected with the disease, if left untreated, eventually may become dependent upon the community for his support. His education will be more expensive, his power to earn a livelihood will be permanently impaired, and instead of becoming a useful member of society, he may, and through no fault of his, become a permanent public charge.

In the United States, the State of Massachusetts appropriated \$40,000 in 1910 for the support of its blind asylums; the State of New York, \$110,000; while the biennial appropriation for the State of Pennsylvania for its institutions of the same kind in 1909 amounted to \$265,000. When we aggregate private expenses, amounts spent by States and cities, and also the estimate of the potential earning power of individuals thus disabled, the economic loss on account of ophthalmia neonatorum is enormous.

# LEGISLATIVE MEASURES FOR THE CONTROL OF OPHTHALMIA NEONATORUM.

Notwithstanding this great economic loss to the State on account of ophthalmia neonatorum, it was not until 1881 that Credé gave to the world a prophylactic, thereby connecting forever his name with the prevention of the disease and the subsequent saving of the sight of infants. The effective and simple way in which he checked the infection by the use of silver salts, and the statistics compiled by him and others, gave substantial support to his theories, which have been gradually incorporated in the sanitary policy of all civilized countries. Legislative bodies both in this country and abroad having accordingly had impressed upon them the importance of the disease have adopted various legal measures for its control.

It is the object of this bulletin to present a comparative statement of the several measures adopted in the different States and to bring together copies of the laws in which they are contained. Brief mention is also made of measures that are required to be taken in certain countries abroad.

# SOME MEASURES REQUIRED TO BE OBSERVED ABROAD.

In France ophthalmia neonatorum is classed as one of the communicable diseases, must be reported, and is subject to disinfection. In Italy the regulations for midwives provide that the lids and conjunctive of infants must be washed after birth with a disinfecting solution, and that if an inflammation develops a physician must be called immediately.

In Belgium a physician must be called to attend all cases of ophthalmia neonatorum, while midwives, before bathing the infant, are required to wash its eyes with sterilized water. In Bavaria the midwife is required to carry with her a vial containing the nitrate

of silver solution with directions for its use. In Austria a penalty is provided for midwives failing to call a doctor in cases of ophthalmia neonatorum. Similar regulations are in force in Switzerland.

The Ophthalmic Society of Great Britain and Ireland has recommended that the following note be printed on all birth certificate forms: "If the eyelids are red and swollen, or form the site of a secretion some days after birth, the child should be taken to the physician without delaying one day. The disease is very dangerous; if not cured in time the sight of both eyes may be lost." The insertion of a similar statement in the birth certificates used in the different States would no doubt be productive of much good, and some benefit might also be expected from reserving in the certificate a space for the reporting of the condition of the eyes.

#### LEGISLATION IN THE UNITED STATES.

So far as known, the first legal steps taken by any State to control ophthalmia neonatorum in the United States were those of Maine in 1891, when its legislature enacted the first law relative to ophthalmia neonatorum in this country. In 1892 New York followed with an amendment to the law relative to midwives and nurses.

Subsequently, other States took legislative action. The dates of the respective laws are as follows:

Mary 20	1001
Maine	
New York	
Rhode Island	1892
Minnesota <sup>1</sup> Feb. 22,	1893
OhioMar. 16,	1894
MarylandApr. 6,	
New Jersey Mar. 11,	
Michigan	1895
	1895
, ė · · ·	1895
IllinoisJune 21,	1895
PennsylvaniaJune 26,	
South Carolina	
	1896
, ė ir ir	1899
Massachusetts	1905
Idaho	
Wisconsin	
Vermont	
Tennessee	
	1911
	1911
	1911
	1911
New Hampshire	1911

<sup>&</sup>lt;sup>1</sup> Repealed by chap. 108 Revised laws, 1905. Provisions now incorporated in regulations.

<sup>&</sup>lt;sup>2</sup> Since Jan. 4, 1910, a provision of the sanitary code.

In addition to the above States, provisions with respect to ophthalmia neonatorum are contained in the Sanitary Code of Louisiana. Nebraska has incorporated in the regulations of the State board of health various recommendations regarding the disease, and the Kansas State Board of Health has recommended and the Oregon State Board and New York Department of Health require its being reported by physicians. In the District of Columbia also regulations became effective August 25, 1911, requiring midwives or persons other than physicians in charge of eases of childbirth to report within six hours the occurrence of inflammation of the eyes of the new-born when attended by discharge.

The provisions of the several laws are quite varied. In all of them, however, it is the object to insure early treatment of cases of ophthalmia neonatorum, and to this end reports in some form or another are required to be made of the occurrence of eases in all the States men-

tioned, except Nebraska.1

It will be understood that in the majority of the States such cases are not required to be reported in the manner prescribed for other communicable diseases. In some States these reports are required to be made by the parents; in others, by midwives, nurses, or guardians; and in still others, by physicians in attendance. In South Carolina, the law requiring reports does not apply to towns under 1,000 inhabitants. The cases must be reported within six hours in Connecticut, Idaho, Illinois, Indiana, Iowa, Massachusetts, New Jersey, Ohio, Pennsylvania, Rhode Island, Utah, and Wisconsin; within 12 hours in Louisiana, Minnesota, Porto Rico, and Texas; and immediately in Kansas, Maine, Maryland, Michigan, Missouri, New York, South Carolina, and Tennessee.

These reports must be made to local health authorities in Connecticut, Louisiana, Indiana, Massaehusetts, Minnesota, New Jersey, North Dakota, South Carolina, Utah, Vermont, Wisconsin; to either the health authorities or a medical practitioner in Idaho, Illinois, Iowa, Maryland, Michigan, New York, Ohio, Rhode Island, Pennsylvania, Tennessee, Texas; and only to a medical practitioner in Maine, Missouri, and Porto Rico.

The disease must be reported by the midwife, nurse, or attendant in all these States. In addition, the laws of Indiana, Massachusetts, North Dakota, and Utah specifically state that cases must be reported by physicians, and the same provision is contained in the regulations of the State health authorities of Kansas, Oregon, and New York.

In Indiana and North Dakota, provision is made in law whereby all birth certificates shall have thereon the question "Were precautions taken against ophthalmia neonatorum?" and failure to answer

<sup>&</sup>lt;sup>1</sup> Pub. Health Bull. No. 45, P. H. and M. H. S.: A Digest of Laws and Regulations of the Various States Relating to the Reporting of Sickness.

the same renders unlawful all bills or charges for professional services in connection with the case.

Other States as Minnesota, New York, and Ohio have a similar requirement in their birth certificates. The following is the form of certificate used in New York:

	F BIRTH.	NE	w	YORK STATE BUREAU O	DEPARTMENT OF HEALTH, F VITAL STATISTICS.
County of				CERTIFI	CATE OF BIRTH.
Town of or Village of	•••••			(No	Registered No
Full name of chi	ild				{If child is not yet named, make supplemental report, as directed.
Sex of child.	(To be answere	Number in order of hirth, d only in event blrths.)	er of hirth. y in event		Date of birth, 19
FATHER.  Full name Residence Color or race Age at last hirthday (Years.) Birthplace Occupation.			s.)	MOTHER.  Full maiden name Residence. Color or race. Age at last hirthday. (Years.)  Birthplace. Occupation.	
What preventive for ophthalmia neonatorum did you use? If none, state the reason therefor			present h	children horn to this mother, including irth	
Given name a report	y that 1 attended	(Sign Date plemental Addu 19 Filed	chi atu d -	ild, who was	N OR MIDWIFE.1 born alive atM., on the date above  (Physician, midwife, father, etc.)  Registrar.

The provisions of the laws confine themselves merely to requiring reports of cases in Connecticut, Idaho, Illinois, Maine, Maryland, Michigan, Missouri, Ohio, Rhode Island, South Carolina, Tennessee, and Texas. Health authorities must, when no physician is in charge, furnish remedial treatment in Indiana, Louisiana, Minnesota, New Jersey, and Wisconsin.

The State health authorities of Massachusetts, New Jersey, and Vermont are specifically authorized in law to furnish prophylactic outfits to physicians for use in their practice. Rhode Island was the first State, however, to introduce such outfits, which are distributed through diphtheria antitoxin stations and under general authority vested in the State board of health for the preservation of the public health. In New York also provision is made for the control and prevention of ophthalmia neanatorum, and in accordance therewith

When there was no attending physician or midwife, then the father, householder, etc., should make this return.

prophylactic packets are given away through health officers. In the District of Columbia similar packets are issued to midwives by the health department.

The outfit distributed by the State health authoritics ordinarily consists of a small vial holding an amount of a 1 per cent solution of nitrate of silver sufficient for use on a child, a sterilized dropper and bulb, and a circular containing instructions for administration.

The treatment must be conducted in accordance with the rules of the State board of health in Utah, Vermont, New Hampshire, and Wisconsin. The treatment to be followed is prescribed in the law of Porto Rico and the health regulations of Nebraska. Local health authorities must instruct parents as to the dangers of the disease in Pennsylvania and Wisconsin, and physicians and midwives must do likewise in Iowa and physicians and nurses in Nebraska. Copies of the law must be furnished by local health authorities to midwives and nurses in Missouri, New Jersey (also to medical practitioners), Pennsylvania, and Rhode Island. Disinfection of clothing is required in both Nebraska and Porto Rico.

Authority is specifically conferred by law on the State board of health of Wisconsin to distribute literature relative to the discase, and in the use of their general powers such literature has been issued during 1910 by the State health authorities of California, Indiana, Kansas, Kentucky, Maryland, Massachusetts, New Jerscy, New York, Ohio, Oklahoma, Oregon, Pennsylvania, Tennessee, Vermont, and Wisconsin.

All of the laws in force contain one or more good provisions, such as those requiring birth reports, with reference or instructions in them regarding ophthalmia neonatorum; case reports to health authorities not only by midwives but also by physicians and parents; distribution of literature; instructions as to treatment; disinfection; furnishing of prophylactics; control over midwives; and medical attendance if the person is unable to pay. All of these provisions would be included in a uniform law, which is desirable in order to successfully control ophthalmia neonatorum.

Unfortunately the activities of the sanitarian are too often restrained to pointing out the evils of ophthalmia neonatorum with no means at his disposal to combat them. It is society as a whole, in the last analysis, which must utilize the knowledge at its disposal and furnish the means to eliminate the disease. These are cheap and comparatively easy of application, but society must ultimately decide whether it is willing to pay the price.

# STATE LAWS AND REGULATIONS RELATING TO OPHTHALMIA NEONATORUM.

The following laws were compiled in the bureau from the statutes of the several States and Territories, as found in the Law Library of Congress, and from copies of recent laws transmitted by special request by the respective State health authorities.

Galley proof of the analysis of the laws, and the laws themselves, were submitted to the health officials of the several States and Territories for criticism and correction, and acknowledgment is due and here made for this service and for helpful suggestions.

#### CONNECTICUT.

#### (General Statutes, 1902.)

Sec. 2535. Should one or both eyes of an infant become inflamed or swollen, or reddened at any time within two weeks after its birth, the midwife, nurse, or attendant having charge of such infant shall report in writing, within six hours, to the health officer or board of health of the city, town, or borough in which the parents of the infant reside, the fact that such inflammation, swelling, or redness of the eyes exists. Every person violating the provisions of this section shall be fined not more than \$200.

#### DISTRICT OF COLUMBIA.

#### (Regulations for the prevention of infant blindness.)

SECTION 1. Whenever any midwife, or any person other than a registered physician, is in attendance upon any case of childbirth and the newly born child has inflammation of the eyes, attended by a discharge therefrom, said midwife or other person shall report that fact in writing to the health officer, so that said report shall be received by the health officer within the six hours after the existence of said discharge becomes known to said midwife.

SEC. 2. No midwife or person other than a registered physician shall treat any case of inflammation of the eyes of a newly born child attended by a discharge therefrom for any period longer than may be absolutely necessary to obtain the services of a registered physician.

SEC. 3. Any person who violates any of the provisions of these regulations shall, upon conviction thereof in the police court, be punished by a fine not exceeding \$40. Prosecutions for violations of the provisions of these regulations shall be on information filed in the police court by the Corporation Counsel of the District of Columbia or by any of his assistants.

#### IDAHO.

#### (Revised Codes, 1908.)

SEC. 1108. Should one or both eyes of an infant become inflamed or swollen or reddened, or should any pus or secretion form in the eyes or upon the edge of the lid, at any time within two weeks after birth, it shall be the duty of any midwife, nurse or other person having charge of such infant to report, within six hours after discovery

of such inflammation, redness or formation of pus or secretion, to the local health officers, or to some legally qualified practitioner of medicine in the district in which such case shall occur, the fact that such inflammation, swelling or redness or accumulation in the eye exists. Any failure to comply with the provisions of this section shall be punished by a fine of not to exceed one hundred dollars, or imprisonment not to exceed ninety days, or by both fine and imprisonment, in the discretion of the court.

#### ILLINOIS.

#### (Chapter 38, Hurd's Revised Statutes, 1909.)

Sec. 510. Should any midwife or nurse having charge of an infant in this State, notice that one or both eyes of such infant are inflamed or reddened at any time within two weeks after its birth, it shall be the duty of such midwife or nurse having charge of such infant to report the fact in writing within six (6) hours to the health officer, or some legally qualified practitioner of medicine of the city, town, or district in which the parents of the infant reside.

Sec. 511. Any failure to comply with the provisions of this act shall be punishable by a fine not to exceed one hundred (\$100) dollars, or imprisonment not to exceed six (6) months, or both.

#### INDIANA.

#### (Acts of 1911, chapter 129.)

Section 1. Whenever a child is born, the physician, midwife or any other person who is present and engaged as professional attendant, shall report said birth on a blank supplied by the State board of health to the health officer having jurisdiction, within 36 hours after such birth occurs. Said birth certificate in addition to other data ordered by the State board of health shall have upon it this question: Were precautions taken against ophthalmia neonatorum? And it shall be a violation of this act for any physician or midwife in professional attendance at a birth to fail to report same as herein commanded or to omit answering the said question: Were precautions taken against ophthalmia neonatorum? All bills or charges for professional services rendered at a birth shall be unlawful if report is not made as herein commanded.

Sec. 2. It shall be the duty of all physicians or midwives in professional attendance upon a birth to always carefully examine the eyes of the infant, and if there is the least reason for suspecting infection of one or both eyes then said physician or midwife in professional attendance shall apply such prophylactic treatment as may be recognized as efficient in medical science.

Sec. 3. Should one or both eyes of an infant become inflamed, swollen, or reddened, or show any unnatural discharge or secretion at any time within two weeks after its birth, and no legally qualified physician is in attendance upon the infant at that time, it shall be the duty of its parents, or in their absence, whoever is caring for said infant to report the fact in writing within six hours after discovery to the health officer having jurisdiction: *Provided*, Said report to said health officer need not be made from recognized hospitals.

Sec. 4. Upon receipt of a report as set forth in section 3 of this act health officers shall direct the parents, or whoever has charge of such infant suffering from such inflammation, swelling, redness or unnatural secretion or discharge of the eyes, to immediately place it in charge of a legally qualified physician or in charge of the city or township physician if unable to pay for medical service.

Sec. 5. Any violation of the provisions of this act shall be punished by a fine of not less than ten dollars nor more than fifty dollars.

#### IOWA.

#### (Acts of 1896, chapter 57.1)

- SECTION 1. Should one or both eyes of an infant become inflamed, or swollen, or reddened at any time within two weeks after its birth, it shall be the duty of the midwife, parent, guardian, or nurse, or other persons having charge of such infant to report within six (6) hours after the discovery thereof by such person in charge of such infant to the health officer or some legally qualified practitioner of the city, town, or district in which the parents of the infant reside, the fact that such inflammation, or swelling, or redness of the eyes exists.
- Sec. 2. It is hereby made the duty of attending physicians or midwives to instruct parents and nurses in regard to the provisions of this act and danger of sore eyes in infants.
- SEC. 3. Any failure to comply with the provisions of this act shall be punished by a fine not less than twenty-five dollars or more than one hundred dollars, or imprisonment in the county jail not to exceed 30 days or both.

#### KANSAS.

# (Resolution, State board of health.)

That \* \* \* ophthalmia neonatorum be included in the diseases required to be reported by the attending physician.

#### LOUISIANA.

#### (Sanitary Code, 1911.)

- 62. (a) Whenever in any community of this State, any nurse, midwife or other person not a legally qualified practitioner of medicine shall notice inflammation of the eyes or redness of the lids in a newborn child under his or her care, it shall be the duty of such person to report the same to the town or parish health officer within 12 hours of the time the disease is first noticed.
- (b) Upon such notification it shall be the duty of the municipal or parish health officer to serve notice on the family to inform their family physician.
- (c) Where no physician is in attendance, or where by reason of the inability of the family to employ a physician, it will be his duty to provide remedial relief at the expense of the municipality, or at the expense of the parish if the afflicted lives without the corporate limits of any municipality.

#### MAINE.

#### (Revised Statutes, 1903, chapter 18.)

SEC. 90. If one or both eyes of an infant become reddened or inflamed at any time within four weeks after birth, the midwife, nurse or person having charge of said infant shall report the condition of the eyes at once to some legally qualified practitioner of medicine of the city, town or district in which the parents of the infant reside. Any failure to comply with the provisions of this section shall be punishable by a fine not to exceed one hundred dollars, or imprisonment not to exceed six months.

#### MARYLAND.

# (Code of 1904, article 27.)

SEC. 231. If at any time within two weeks after the birth of any infant one or both of its eyes, or the eyelids, be reddened, inflamed, swollen or discharging pus, the midwife, nurse or person other than a legally qualified physician in charge of such infant shall refrain from the application of any remedy for the same, and shall

<sup>1</sup> Omitted from Code of 1897. Sec. 27, chap. 20, acts of 1897 declares that the code is "the authoritative publication of the existing laws of the State."

immediately report such condition to the health commissioner or to some legally qualified physician in the city, county or town wherein the infant is cared for. Any person and persons violating the provisions of this act shall, on conviction, be punished by a fine not to exceed one hundred dollars, or by imprisonment in jail not to exceed six months, or by both fine and imprisonment.

#### MASSACHUSETTS.

# (Revised Laws, 1902, chapter 75.)

SEC. 49 (as amended by chap. 269, acts of 1910). \* \* \* Should one or both eyes of an infant become inflamed, swollen and red, and show an unnatural discharge at any time within two weeks after its birth, it shall be the duty of the nurse, relative or other attendant having charge of such infant to report in writing within six hours thereafter, to the board of health of the city or town in which the parents of the infant reside, the fact that such inflammation, swelling and redness of the eyes and unnatural discharge exist. On receipt of such report, or of notice of the same symptoms given by a physician as provided by the following section, the board of health shall take such immediate action as it may deem necessary in order that blindness may be prevented. Whoever violates the provisions of this section shall be punished by a fine of not more than one hundred dollars \* \* \*

Sec. 50 (as amended by chap. 480, acts of 1907). \* \* \* If one or both eyes of an infant whom or whose mother he (a physician) is called to visit become inflamed, swollen and red, and show an unnatural discharge within two weeks after the birth of such infant, he shall immediately give notice thereof in writing over his own signature to the selectmen or board of health of the town: and if he refuses or neglects to give such notice, he shall forfeit not less than fifty nor more than two hundred dollars for each offense.

## (Chapter 458, acts of 1910.)

- SEC. 1. The State board of health shall furnish, free of cost, to physicians registered under the laws of the Commonwealth such prophylactic remedy as it may deem best for the prevention of ophthalmia neonatorum
- Sec. 2. To carry out the provisions of this act there may be expended annually from the treasury of the Commonwealth a sum not exceeding twenty-five hundred dollars.

#### (Acts of 1911, chapter 643.)

The sums hereafter mentioned are appropriated \* \* \* for the salaries and expenses of the State board of health for the fiscal year ending on the 30th day of November, 1911, to wit:

For expenses in carrying out the provisions of the law relative to the prevention of ophthalmia neonatorum, a sum not exceeding two thousand five hundred dollars.

#### MICHIGAN.

#### (Compiled Laws of 1897.)

Sec. 4475. Should one or both eyes of an infant become inflamed or swollen, or reddened, or should any pus or secretion form in the eyes or upon the edge of the lids, at any time within two weeks after birth, it shall be the duty of any midwife, nurse or other person having charge of such infant, to report in writing within six hours after discovery of such inflammation, redness or formation of pus, or secretion, to the local health officer or some legally qualified practitioner of medicine in the

<sup>1</sup> Ophthalmia neonatorum made also notifiable by resolution of the State board of health on May 6, 1909

city, town or district in which such case shall occur, the fact that such inflammation, swelling or redness or accumulation in the eyes exists.

SEC. 4476. Any failure to comply with the provisions of this act shall be punished by a fine not to exceed one hundred dollars or imprisonment not to exceed six months, or both such fine and imprisonment in the discretion of the court.

#### MINNESOTA.

# (Regulations, State board of health.)

SEC. 80. Whenever one or both eyes of an infant become inflamed, reddened or diseased at any time within two months after its birth, it shall be the duty of any midwife, nurse, parent or other person having charge of such infant to report the facts of such affection in writing to the local health officer of the city, village or township in which the person having charge of said infant resides within 12 hours after ascertaining the fact.

SEC. 81. Any health officer to whom may have been reported any case of eye disease in a child under two months of age shall forthwith visit said child and provide immediate medical treatment unless said child is already under the charge of a competent medical practitioner.

#### MISSOURI.

#### (Revised Statutes, 1909.)

SEC. 8321. Should one or both lids of either eye or of both eyes of an infant become red or swollen, or should there be any discharge from either eye or from both eyes, at any time within three weeks after its birth, it shall be the duty of the midwife, nurse or other person having charge of said infant, at once, unless for good cause shown, to report the condition of said eyes to a legally qualified practitioner of medicine.

SEC. 8322. Every health officer shall furnish a copy of sections 8321 to 8323, inclusive, to each and every person who is known to him to act as midwife or nurse in the city or town from which such health officer is appointed, and the secretary of state shall cause a sufficient number of copies of said sections to be printed and shall supply the same to the health officers on application.

SEC. 8323. Any failure to comply with said provisions of sections 8321 and 8322 shall be a misdemeanor, and shall be punishable by a fine of not less than ten nor more than one hundred dollars, or by imprisonment not to exceed six months, or by both such fine and imprisonment.

#### NEBRASKA.

#### [Regulations, State board of health.]

Rule 29. The disease ophthalmia neonatorum, prevalent only among newborn infants, is one of the most fruitful sources of blindness. All things considered, where there is the least suspicion of the prevalence of any gonorrhœal infection, or a mucopurulent discharge from the vagina during birth the attending physician shall take precautionary measures at once to prevent this fearful disease. This consists in the instillation of two drops of a 2 per cent solution of nitrate of silver in the eyes of the newborn child after thoroughly cleansing the eyelids, then parting them and introducing the drug. When there is reason to suspect gonorrhœal contagion this must be repeated the second day. \* \* \* It is the duty of physicians, nurses and directors of public charities to disseminate among the poorer classes a knowledge of the dangers of this disease and the necessity for prompt treatment. Disinfection of the clothing of the patient, and burning of all cloths, etc., is essential, as there is great. danger of contamination.

#### NEW HAMPSHIRE.

## [Acts of 1911, chap. 121.]

SECTION 1. The State board of health is hereby vested with power and authority to publish such information and instruction and to make such rules, regulations and ordinances as it may deem expedient to prevent the development of inflammation of the eyes of the newborn babe, or so-called ophthalmia neonatorum, in public hospitals or institutions in which midwifery is practiced, either wholly or in part, and in connection with the practice of legally licensed midwives.

SEC. 2. Said State board of health is authorized to enforce its rules, regulations and

ordinances through its inspectors, or through the local boards of health.

SEC. 3. Any person violating [any rule, regulation or ordinance of said State board of health regarding the prevention of ophthalmia neonatorum shall be guilty of a misdemeanor.

#### NEW JERSEY.

# [General statutes, 1895, p. 1676.]

SECTION 1. Should one or both eyes of an infant become inflamed, swollen, or reddened, or show any unnatural discharge at any time within two weeks after its birth, and no legally-qualified practitioner of medicine be in attendance upon the infant at the time, it shall be the duty of the midwife, nurse, attendant, or relative having chargo of such infant to report the fact in writing, within six hours, to the local board of health of the city, township, or other municipality in which the parents of the infant reside.

SEC. 2. The said local board of health shall direct the parents or person having charge of such infant suffering from such inflammation, swelling, redness, or unnatural discharge of the eyes to immediately place it in charge of a legally-qualified practitioner of medicine, or in charge of the physician of the city, township, or other municipality if unable to pay for medical services.

SEC. 3. (As amonded by chap. 147, acts of 1910.) Every local board of health in the State of New Jersey shall furnish a copy of this act to every legally-qualified practioner of medicine, and to each person who is known to act as a midwife or nurse in the city, township, or other municipality for which such board of health'is appointed; and the board of health of the State of New Jersey shall cause a sufficient number of copies of this act to be printed and supply the same to each local board of health of this State for distribution.

Sec. 4. (As amended by chap. 147, acts of 1910.) Any person violating any of the provisions of this act shall be liable to a penalty of \$50, to be recovered in an action of debt by the local board of health of the municipality in which the violation occurs.

# [Acts of 1911, chap. 96.]

SECTION 1. The State board of health shall furnish, free of cost, to physicians and midwives, registered under the laws of this State, such prophylactic remedies as it may deem best for the prevention of ophthalmia neonatorum, together with such instructions as it may deem necessary for the proper administration of the same.

Sec. 2. The sum of \$2,000 is hereby appropriated for the purpose of carrying out the provisions of this act when included in the annual or supplemental appropriation bill.

#### NEW YORK.

#### (Consolidated Laws, 1909, chap. 40.)

Sec. 482. A person who: \* \* \* 3. Being a midwife, nurse or other person having the care of an infant within the age of two weeks neglects or omits to report immediately to the health officer or to a legally qualified practitioner of medicine of the city, town or place where such child is being cared for, the fact that one or both

eyes of such infant are inflamed or reddened, whenever such shall be the case, or who applies any remedy therefor without the advice, or except by the direction of such officer or physician; \* \* \* is guilty of a misdemeanor.

# (Acts of 1910, chapter 513.)

Sec. 1. The treasurer shall pay \* \* \* to the persons, and for the purposes indicated in this act, the amount named or so much thereof as shall be sufficient to accomplish, in full, the purposes designated by the appropriations (p. 1141).

# (Health department.)

For the control and prevention of ophthalmia neonatorum and the prevention of blindness, five thousand dollars (\$5,000), or as much thereof as may be necessary.

State department of health, Public Health Manual (p. 129).

Every physician is required by law to report at once all cases of communicable disease in his care to the health officer, and if no physician is in attendance, the duty is imposed on the householder where the case occurs,

The diseases to be so reported have, under the law, been designated by the State commissioner of health as \* \* \* ophthalmia neonatorum \* \* \*

The occurrence of these disesases should be reported immediately to the State department of health by the health officer \* \* \*.

#### NORTH DAKOTA.

## (Acts of 1911, chap. 188.)

- Section 1. Whenever a child is born, the physician, midwife or any other person who is present and engaged as professional attendant, shall report said birth on a blank supplied by the State board of health to the health officer having jurisdiction, within 36 hours after such birth occurs. Said birth certificate in addition to other data ordered by the State board of health shall have upon it this question: "Were precautions taken against ophthalmia neonatorum?" And it shall be a violation of this act for any physician or midwife in professional attendance at a birth to fail to report same as herein commanded or to omit answering the said question, "Were precautions taken against ophthalmia neonatorum?" All bills or charges for professional services rendered at a birth shall be unlawful if report is not made as herein commanded.
- SEC. 2. It shall be the duty of all physicians or midwives in professional attendance upon a birth to always carefully examine the eyes of the infant, and if there is the least reason for suspecting of disease of the eyes then said physician or midwife in professional attendance shall apply such prophylactic treatment as may be recognized as efficient in medical science.
- SEC. 3. Should one or both eyes of an infant become inflamed, swollen or reddened, or show any unnatural discharge or secretion at any time within two weeks after its birth, and no legally qualified physician is in attendance upon the infant at that time, it shall be the duty of its parents or, in their absence, whoever is caring for said infant to report the fact in writing within six hours after discovery to the health officer having jurisdiction. *Provided*, Said report to said health officer need not be made from recognized hospitals.
- SEC. 4. Upon receipt of a report as set forth in section 3 of this act, health officers shall direct the parents or whoever has charge of such infant suffering from such inflammation, swelling, redness or unnatural secretion or discharge of the eyes, to immediately place it in charge of a legally qualified physician, or in charge of the city or township physician if unable to pay for medical services.
- SEC. 5. Any violation of the provisions of this act shall be punished by a fine of not less than ten dollars nor more than fifty dollars.

#### оню.

# (General Code, 1910.)

Sec. 12787. Failure to report infant with diseased cyes.—Whoever, being a midwife, nurse or relative in charge of an infant less than 10 days old, fails within six hours after the appearance thereof to report in writing to the physician in attendance upon the family, or if there be no such physician, to a health officer of the city, village or township in which such infant is living, or, in case there be no such officer, to a practitioner of medicine legally qualified to practice, that such infant's eye is inflamed or swollen or shows an unnatural discharge, if that be the fact, shall be fined not less than five dollars nor more than one hundred dollars or imprisoned not less than thirty days nor more than six months, or both.

#### OREGON.

# (Rules and regulations, State board of health, 1911.)

Rule 1. It shall be the duty of every practicing physician in the State of Oregon to report to the county health officer, or to the health officer of the municipal corporation, \* \* \* within 24 hours, by the quickest means of communication, \* \* \* all cases of \* \* \* ophthalmia neonatorum \* \* \* within his jurisdiction.

Rule 3. It shall be the duty of the superintendent of any State institution, and of the superintendent of any children's home or any other institution of public nature, to report to the secretary of the State board of health any of the diseases named in rule 1 \* \* \*

#### PENNSYLVANIA.

#### (Purdon's Digest, 13th edition, p. 1886.)

Sec. 78. Should one or both cycs of an infant become inflamed or swollen or reddened at any time within two weeks after birth, it shall be the duty of the midwife or nurse, or other person having the care of such infant, to report in writing, within six hours after the discovery thereof, to the health officer or legally qualified practitioner of the city, town or district in which the mother of the child resides, the fact that such inflammation or swelling or redness exists.

SEO. 79. It shall be the duty of said health officer, immediately upon receipt of said written report, to notify the parents or the person having charge of said infant, of the danger to the eye or eyes of said infant by reason of said condition from neglect of proper treatment of the same, and he shall also inclose to them directions for the proper treatment thereof.

SEC. 80. Every health officer shall furnish a copy of this act to each person who is known to him to act as midwife or nurse in the city or town for which such health officer is appointed, and the secretary of state shall cause a sufficient number of eopies of this act to be printed and supply the same to such health officers on application.

Sec 81. Any failure to comply with the provisions of this act shall be punishable by fine not to exceed two hundred dollars or imprisonment not to exceed thirty days, or both.

#### (Acts of 1911, page 931.)

SEC. 10. If at any time within two weeks after the birth of an infant, one or both of its eyes or the eyelids be reddened, inflamed, swollen, or discharging pus, the midwife, nurse, or person, other than a legally qualified physician, in charge of such infant, shall refrain from the application of any remedy for the same, and shall immediately report such condition to the local health authorities, and, at the same time, to some legally qualified physician in the city, town, or county wherein the infant is cared for. Any person or persons violating the provisions of this section shall, on conviction, be punished by a fine not to exceed one hundred dollars, or by imprisonment in jail not to exceed six months, or by both fine and imprisonment, in the discretion of the court, alderman, magistrate, or justice of the peace.

#### PORTO RICO.

#### (General Order No. 170, 1899.)1

SEC. 51. Thirty per cent or more of existing blindness has been shown to be due to infection of the eyes at or shortly after birth. This infection being readily amenable to treatment, it is ordered that whenever in any city, district or place in this island any nurse, midwife, or other person, not a legally qualified practitioner of medicine, shall notice any inflammation of the eyes or redness of the lids in a newborn child under his or her care, it shall be the duty of such person to report the same to some legally qualified practitioner of medicine within twelve hours of the time the disease is first noticed.

SEC. 52. It shall be the duty of every legally qualified practitioner of medicine to treat all cases of "ophthalmia neonatorum" by the Credé method, which is as follows:

SEC. 53. Gently open the lids and wash out the eyes with pure lukewarm water, which has been boiled, using a clean soft piece of old linen or muslin or a pledget of absorbent cotton, but do not use a sponge.

SEC. 54. Then immediately drop in each eye one or two drops of a 1 per cent solution of nitrate of silver, and continue its use so long as it may be necessary.

SEC. 55. Half an hour after each application of the silver solution, wash the eyes with warm salt and water (a teaspoonful of table salt to a pint of boiled water) or with a solution of boric acid (10 grains to 2 tablespoonfuls of boiled water) and continue this last application every hour or two until the eyes are well, gradually lengthening the time.

SEC. 56. This disease is very contagious, even to grown persons, therefore burn or boil all cloths that have touched the eyes, avoid kissing the child, wash the hands after bathing the child's eyes, and allow no one else to use the same basin in which the child is bathed.

SEC. 57. Any person guilty of violation of any of the provisions of this order shall, upon conviction thereof, be punished by a fine of not less than ten dollars (\$10) nor more than two hundred dollars (\$200), or imprisonment for not less than ten (10) nor more than ninety (90) days, or by both such fine and imprisonment, at the discretion of the court.

#### RHODE ISLAND.

#### (General laws of 1909. Chapter 343.)

SEC. 25. Should any midwife or nurse, or person acting as nurse, having charge of an infant in this State, notice that one or both eyes of such infant are inflamed or reddened at any time within two weeks after its birth, it shall be the duty of such midwife or nurse, or person acting as nurse, so having charge of such infant, to report the fact in writing within six hours to the health officer or some qualified practitioner of medicine, of the city or town in which the parents of the infant reside.

SEC. 26. Every health officer shall furnish a copy of sections 25, 26, and 27, of this chapter to each person who is known to him to act as midwife or nurse in the city or town for which such health officer is appointed, and the secretary of state shall cause a sufficient number of copies of said sections to be printed, and supply the same to such health officers on application.

SEC. 27. Every person who shall fail to comply with the provisions of the two sections next preceding shall be fined not exceeding one hundred dollars, or imprisoned not exceeding six months, or both.

#### SOUTH CAROLINA.

#### (Criminal Code, 1902.)

SEC. 331. Should one or both eyes of an infant become reddened or inflamed at any time after birth, it shall be the duty of the midwife or nurse or person having charge of said infant to report the condition of the eyes at once to the local board of health of the city or town in which the parents of the infant reside.

Any failure to comply with the provisions of this section shall be punishable by a fine not to exceed twenty-five dollars, or imprisonment not to exceed one month, or both.

This section shall not apply to towns or cities of less than one thousand inhabitants.

#### TENNESSEE.

#### (Ch. 10, acts of 1911.)

SEC. 1. A person who, being a midwife, nurse, or other person having the care of an infant within the age of two weeks, neglects or omits to report immediately to the health officers or to a legally qualified practitioner of medicine of the city, town, or place where such child is being cared for, the fact that one or both eyes of such infant are inflamed or reddened whenever such shall be the case, or who applies any remedy therefor without the advice or except by the directions of such officer or physician, or neglects, refuses, or omits to comply with the above requirements shall be guilty of a misdemeanor.

#### TEXAS.

#### (Acts of 1909, ch. 30.)

SEC. 10 (as amended by ch. 95, acts of 1911). \* \* \* Rule 22. Whenever any nurse, midwife, or other person not a legally qualified practitioner of medicine shall notice inflammation of the eyes or redness of the lids in a new-born child under his or her carc, it shall be the duty of such person to report the same to the local health authority, or in his absence any reputable physician, within twelve hours of the time the disease is first noticed. \* \* \*

Any person who shall violate any of the rules, regulations, or provisions of the sanitary code of Texas, as herein set forth, shall be deemed guilty of a misdemeanor and upon conviction shall be fined in any sum not less than ten dollars and not more than one hundred dollars.

#### UTAH.

#### (Acts of 1911, ch. 61.)

SEC. 1. It shall be the duty of every physician and every midwife attending a case of childbirth to report to the local board of health every case where the newly born child has inflammation of the eyes attended by a discharge therefrom. Such report to be made within six hours after the appearance of such disease. It shall be the duty of such physician or midwife to treat the eyes of the child so afflicted in accordance with the rules of the State board of health. Every physician and midwife failing to comply with the provisions of this act shall be guilty of a misdemeanor.

#### (Rules, State board of health.)

Rule 1. No midwife shall treat any case of ophthalmia neonatorum or inflammation of the eyes of a newly born infant unless it is impossible to secure the services of a physician, provided that in case the services of a physician shall be secured, a midwife may begin and carry out treatment until his arrival.

Rule. 2. In the event that the services of a physician can not be secured, midwives are authorized to use and apply the following treatment:

Immediately upon the discovery in a newly born infant of an inflammation of the eyes, attended by a mattery discharge therefrom, 5 drops of a 20 per cent solution of argyrol shall be dropped into the eyes with an eye dropper, after having separated the lids with the thumb and finger; and this treatment shall be repeated every hour for four days, and longer if a discharge is still present. After four days, if the discharge has ceased, the treatment may be reduced in frequency to intervals of four times daily for several days, until it is shown that the discharge is not liable to return.

Before each application of the argyrol solution, the eyes should be thoroughly irrigated, and cleansed by dropping or pouring into them a 1 per cent solution of chloride of sodium (common salt) or a saturated solution of boric acid. For practical purposes, the salt solution may be prepared by dissolving one teaspoonful of salt in a pint of water.

NOTE.—The person treating the eyes should exercise the utmost care to avoid touching the cornea (eyeball), as there is great danger of causing serious injury thereby. In applying the treatment the child should be placed flat upon its back and the head so held that the solution will not quickly escape from the eyes.

Inasmuch as the secretions from the eyes are very infectious, care should be taken to destroy all articles contaminated by them, and to sterilize the hands after each treatment.

The treatment above described is considered by eminent authorities to be entirely effective and safer than solutions of nitrate of silver; and it is recommended to all physicians in general practice.

Solutions of argyrol quickly deteriorate and should be freshly prepared for every case. Upon request the State board of health will furnish materials for preparing fresh solutions.

It is recommended that physicians and midwives shall make one application of the argyrol solution at the birth of every child as a prophylactic or preventive treatment, after having first thoroughly wiped the eyes with absorbent cotton or soft clean linen and bathed them with a saturated solution of boric acid.

Rule 3. On receipt of notification under this act, it shall be the duty of the local health officer to immediately investigate the case and satisfy himself that the rules of the State board of health are properly complied with. He shall also immediately report the case to the State board of bealth by telephone or telegraph.

#### VERMONT.

#### (Cb. 220, acts of 1910.)

SEC. 1. The State board of health are hereby empowered to make such rules and regulations as they may deem necessary for the prevention of blindness caused by the disease known as ophthalmia neonatorum, and they may furnish at public expense such prophylactic outfits as are necessary for the use of physicians.

SEC. 2. Any physician who fails to comply with the regulations established under section 1 of this act shall be fined ten dollars for each offense, and it shall be the duty of the State's attorney to prosecute in all cases on complaint of a local board of health.

#### WISCONSIN.

#### (Annotated Statutes, 1898.)

Sec. 1409a (added by ch. 59, acts of 1909). 1. The State board of health and vital statistics is vested with power and authority to publish and distribute among the physicians, midwives, nurses, or other persons requiring such information, instructions relating to inflammation of the eyes of newborn babes and proper methods of prevention. The board is hereby empowered to make and enforce such rules and regulations as it may deem expedient to prevent the development of inflammation of the eyes of the newborn babe, or so-called ophthalmia neonatorum.

SEC. 1409a-2. 1. It shall be the duty of the attending physician, midwife, nurse, or other person in attendance on a confinement case to use such prophylactic treatment for the prevention of blindness among newborn children as the State board of health and vital statistics in its rules and regulations may determine are necessary. Should one or both eyes of an infant become inflamed, swollen and red, and show an unnatural discharge at any time within two weeks after its birth, the nurse, parents, or other attendant having charge of such infant shall report in writing, within six hours thereafter, to the hoard of health of the city, incorporated village, or town in which the parents of the infant reside, the fact that such inflammation, swelling, redness, or unnatural discharge exists.

2. On receipt of such report the health officer shall inform the attending physician of the conditions complained of, or if there is no physician in attendance the health officer shall then employ at the expense of the town, incorporated village, or city, a competent physician to examine the case reported and the physician shall provide proper treatment or such as recommended in the rules and regulations adopted by the State board of health and vital statistics.

3. The health officer shall immediately upon the receipt of the written report herein provided for, if no physician was in charge, notify the parents or person having charge of said infant of the dangers to the eye or eyes of said infant, and he shall also inclose to the parents or person having charge of the child directions for the proper treatment thereof.

Sec. 1409a-3. Any woman accustomed to attend confinement cases shall be subject to the same penalty for violation as physicians or nurses.

Sec. 1409a—4. Any person who violates, neglects, or refuses to observe the provisions of this act shall be punished by a fine of not more than one hundred dollars for each offense.

#### DECISIONS.

One who, with no natural or legal duty, voluntarily seeks and assumes the care and instruction of a child is amenable to the statute if he fails to perform the duty required, to the injury of the child. (Cowley v. People, 83 N. Y., 464.)

A statute making a person liable for willfully omitting to perform the duty imposed upon him by law to furnish medical attendance to a minor places the duty of furnishing such attendance upon the one upon whom the law imposes the obligation of caring for the minor.

The constitutional guaranty of religious freedom is not violated by a statute requiring the furnishing of medical attendance to minors where the Constitution provides that liberty of conscience shall not justify practices inconsistent with the safety of the State. (People v. Pierson, 176 N. Y., 201.)

#### LIST OF PUBLIC HEALTH BULLETINS.

The following is a list of the Public Health Bulletins that have been issued:

- \*1. Report on Trichinæ and Trichinosis. By W. C. W. Glazier. 1881. 212 pages. 87 il. 1 map. Paper. Senate Executive Document No. 9, Forty-sixth Congress, third session. Out of print.
- \*2. Report on the Etiology and Prevention of Yellow Fever. By George M. Sternberg. 1890. 271 pages. 21 pl. 20 il. Cloth. Out of print.
- \*3. Mortality Statistics in the United States for the year ending December 31, 1897.

  From Annual Report Marine-Hospital Service, 1898. 24 pages. Paper.
  Out of print.
- Yellow Fever: Its Nature, Diagnosis, Treatment, and Prophylaxis and Quarantine Regulations Relating thereto. By officers of the Marine-Hospital Service. Reprint from Annual Report Marine-Hospital Service, 1898. 176 pages. 1 il. Paper.
- \*5. Shipment of Merchandise from a Town infected with Yellow Fever. By H. R. Carter. 1899. 15 pages. Paper. Out of print.
- Report of Commission of Medical Officers detailed by authority of the President to Investigate the Cause of Yellow Fever. By Eugene Wasdin and H. D. Geddings. July, 1899. 98 pages. 26 charts. 2 il. Paper.
- \*7. The Bubonic Plague. By Walter Wyman. January, 1900. 50 pages. Paper. Superintendent of Documents, 5 cents.
- \*8. Report of Commission appointed by the Secretary of the Treasury for the Investigation of Plague in San Francisco. By Prof. Simon Flexner, Prof. F. G. Novy, and Prof. L. F. Barker. January 23, 1901. 23 pages. 1 map. Paper. Out of print.
- \*9. Report Relating to the Origin and Prevalence of Leprosy in the United States. By a Commission of Medical Officers of the U. S. Marine-Hospital Service. 1902. 119 pages. 25 il. Paper. Senate Document No. 269, Fifty-seventh Congress, first session. Superintendent of Documents. Cloth, \$1.00.
- \*10. Plague Conference. Containing a copy of the address of the chairman, and resolutions passed by a conference called in accordance with requests from a number of State Boards of Health, and under authority of section 7, act of Congress approved July 1, 1902, to consider the plague situation. Reprint from P. H. R. No. 4, Vol. XVIII, January 23, 1903. 9 pages. And February 6, 1903. 41 pages. Paper. Out of print.
- \*11. Transactions of the First Annual Conference of State and Territorial Health Officers with the United States Public Health and Marine-Hospital Service.

  June, 1903. 120 pages. Cloth. Out of Print.
- 12. Transactions of the Second Annual Conference of State and Territorial Health Officers with the United States Public Health and Marine-Hospital Service.

  June, 1904. 95 pages. Cloth.
- The Public Health and Marine-Hospital Service of the United States. A Brief History. Prepared for the Louisiana Purchase Exposition. December, 1904. 16 pages. Paper.
- \*14. Sanatorium for Consumptives, Fort Stanton, N. Mex. By P. M. Carrington.
  Reprint from Annual Report Public Health and Marine-Hospital Service,
  1904. 19 pages. Paper. Out of print.

15. Transactions of the Third Annual Conference of State and Territorial Health Officers with the United States Public Health and Marine-Hospital Service. May, 1905. 52 pages. Cloth.

16. How to Prevent Yellow Fever-No Mosquitoes, No Yellow Fever. By Walter

Wyman. July 31, 1905. 3 pages. Circular.

 Transactions of the Fourth Annual Conference of State and Territorial Health Officers with the United States Public Health and Marine-Hospital Service. May, 1906. 75 pages. Cloth.

18. Transactions of the Fifth Annual Conference of State and Territorial Health Officers with the United States Public Health and Marine-Hospital Service.

May, 1907. 47 pages. Cloth.

19. Trachoma, Its Character and Effects. By Taliaferro Clark, and J. W. Schere-

schewsky. 1907. 34 pages. 6 il. Paper.

\*20. The Public Health and Marine-Hospital Service of the United States. A Brief History. Prepared for the Jamestown Ter-Centennial Exposition. 1907. 12 pages. Paper. Out of print.

\*21. Transactions of the Sixth Annual Conference of State and Territorial Health Officers with the United States Public Health and Marine-Hospital Service.

April, 1908. 79 pages. Cloth. Out of print.

\*22. The Present Pandemic of Plague. By J. M. Eager. 1908. 30 pages. Paper. Out of print.

\*23. Pellagra—A Precis. By C. H. Lavinder. July 24, 1908. 22 pages. 1 il.

Paper.

- 24. The Marine-Hospital Sanatorium, Fort Stanton, N. Mex. Prepared for the International Congress on Tuberculosis, held in Washington, September, 1908. 32 il. 56 pages. Paper.
- \*25. Hookworm Disease. Reprint from Annual Report P. H. and M. H. S., 1908. 5 pages. Paper. Out of print.

26. Studies upon Leprosy.

- I. The Present Status of the Leprosy Problem in Hawaii.
- II. The Reaction of Lepers to Moro's "Percutaneous" Test.
- III. A Note Upon the Possibility of the Mosquito Acting in the Transmission of Leprosy. By W. R. Brinckerhoff. 1908. Investigations made in accordance with the act of Congress approved March 3, 1905. 24 pages. Paper.

27. Studies upon Leprosy.

IV. Upon the Utility of the Examination of the Nose and the Nasal Secretions for the Detection of Incipient Cases of Leprosy. By W. R. Brinckerhoff and W. L. Moore. 1909. Investigations made in accordance with the act of Congress approved March 3, 1905. 29 pages. Paper.

28. Studies upon Leprosy.

- V. A Report upon the Treatment of Six Cases of Leprosy with Nastine (Deycke). By W. R. Brinckerhoff and J. T. Wayson, Honolulu, T. H.
- VI. Leprosy in the United States of America in 1909. By W. R. Brinckerhoff. 1909. Investigations made in accordance with the act of Congress approved March 3, 1905. 25 pages. Paper.

\*29. The Prevalence of Rabies in the United States. By J. W. Kerr and A. M. Stimson. 1909. 16 pages. Paper. Out of print.

\*30. The Rat and its Relation to the Public Health. By various authors. 1910.
254 pages. 60 figs. 6 pls. Paper. Exhausted.

1. Introduction. By Walter Wyman.

- 2. Natural History of the Rat. By D. E. Lantz.
- 3. Plague Infection in Rats. By G. W. McCoy.

<sup>\*</sup> Exhausted and not for distribution.

- \*30. The Rat and its Relation to the Public Health-Continued.
  - 4. Rat Leprosy. By W. R. Brinckerhoff.
  - 5. Bacterial Diseases of the Rat other than Plague. By D. H. Currie.
  - 6. Organic Diseases of the Rat. By G. W. McCoy.
  - 7. Ecto Parasites of the Rat. By N. Banks.
  - 8. Intestinal Parasites of Rats and Mice in their Relation to Diseases of Man. By C. W. Stiles.
  - 9. Rodents in Relation to the Transmission of Bubonic Plague. By Rupert Blue.
  - 10. Rodent Extermination. Rats and Mice. By W. C. Rucker.
  - 11. Natural Enemies of Rats. By D. E. Lantz.
  - 12. Rat-Proofing as an Antiplague Measure. By R. H. Creel.
  - Inefficiency of Bacterial Viruses in the Extermination of Rats. By M. J. Rosenau.
  - Plague Eradication in Cities by Sectional Extermination of Rats and General Rat-Proofing. By Victor G. Heiser.
  - 15. The Rat in Relation to Shipping. By W. C. Hohdy.
  - 16. The Rat as an Economic Factor. By D. E. Lantz.
  - 17. The Rat in Relation to International Sanitation. By J. W. Kerr.
- \*31. Transactions of the Seventh Aunual Conference of State and Territorial Health Officers with the United States Public Health and Marine-Hospital Service.

  June, 1909. 86 pages. Cloth. Exhausted.
  - Hookworm Disease (or Ground-Itch Anemia), its Nature, Treatment, and Prevention. By Prof. C. W. Stiles. 1910. 40 pages. Paper.
  - 33. Studies upon Leprosy. 1910. 25 pages. Paper.
    - VII. A Statistical Study of an Endemic Focus of Leprosy. By W. R. Brinck-erhoff and A. C. Reinecke.
    - VIII. A Palliative Treatment for Leprous Rhinitis. By J. T. Wayson and A. C. Reinecke.
- 34. Maritime Quarautine. By L. E. Cofer. 1910. 25 figs. 64 pages. Paper. Appendix: Disinfectants Authorized by United States Quarantine Regulations and the Proper Method of Generating and Using Same.
- The Relation of Climate to the Treatment of Pulmonary Tuberculosis. By F. C. Smith. 1910. 17 pages. Paper.
- 36. Tuberculosis: Its Nature and Prevention. By F. C. Smith. 1910. 12 pages. 1 plate. Paper.
- 37. The Sanitary Privy: Its Purpose and Construction. By Prof. C. W. Stiles. 1910. 24 pages. 12 figs. Paper.
- 38. General Observations on the Bionomics of the Rodent and Human Fleas. By M. B. Mitzmain. 1910. 34 pages. Paper.
- 39. Studies upon Leprosy. September, 1910. 50 pages. Paper.
  - IX. Mosquitoes in Relation to the Transmission of Leprosy.
  - X. Flies in Relation to the Transmission of Leprosy. By D. H. Currie.
  - XI. Heredity Versus Environment in Leprosy. By H. T. Hollmann.
- \*40. Transactions of the Eighth Annual Conference of State and Territorial Health Officers with the United States Public Health and Marine-Hospital Service. November, 1910. 101 pages. Paper. Exhausted.
- 41. Studies upon Leprosy. November, 1910. 36 pages. Paper.
  - XII. Notes on the Study of Histories of Lepers from the Standpoint of Transmission. By D. H. Currie.
  - XIII. A Contribution to the Study of Rat Leprosy. By D. H. Currie and H. T. Hollmann.

 Disinfectants: Their Use and Application in the Prevention of Communicable Diseases. By T. B. McClintic. December, 1910. 46 pages. Paper.

43. Experimental Studies of Plague and a Plague-like Disease among Rodents. By George W. McCoy. April, 1911. 71 pages. 7 pls. Paper.

44. Acute Anterior Poliomyelitis (Infantile Paralysis). By Wade H. Frost. February, 1911. 52 pages. Paper.

45. A Digest of the Laws and Regulations of the Various States Relative to the Re-

porting of Cases of Sickness. By J. W. Trask.

46. Transactions of the Ninth Annual Conference of State and Territorial Health Officers with the United States Public Health and Marine-Hospital Service. September, 1911.

47. Studies upon Leprosy. By D. H. Currie, Moses T. Clegg, and H. T. Hollmann.

September, 1911.

XIV. The Artificial Cultivation of the Bacillus of Leprosy.

XV. Attempts at Specific Therapy in Leprosy.

48. Pellagra: A Précis. (Revised edition.) By C. H. Lavinder. September, 1911.

 Ophthalmia Neonatorum. An Analysis of the Laws and Regulations Relating Thereto in Force in the United States. By J. W. Kerr. October, 1911.





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